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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: GREG LINDEN

EXAMINER: STEVEN B. McALLISTER

APPLICATION No.: 09/538,679

ART UNIT: 3627

FILED: MARCH 30, 2000

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FOR: AUTOMATICALLY IDENTIFYING SIMILAR
PURCHASING OPPORTUNITIESAppeal Brief

Mail Stop Appeal Briefs-Patent
 Commissioner for Patents
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Sir:

This brief is in furtherance of the Notice of Appeal filed in this case on October 14, 2004. The fees required under § 41.20(b)(2) are addressed in the accompanying TRANSMITTAL OF APPEAL BRIEF.

This brief contains items under the following headings as required by 37 C.F.R. § 41.37 and MPEP § 1206:

- I. Real Party in Interest
- II. Related Appeals and Interferences
- III. Status of Claims
- IV. Status of Amendments
- V. Summary of Claimed Subject Matter
- VI. Grounds of Rejection to be Reviewed on Appeal
- VII. Arguments
- VIII. Claims Appendix
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- X. Related Proceedings

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I. REAL PARTY IN INTEREST

The rights of the inventor in this application have been assigned to Amazon.com, Inc., of Seattle, Washington, as recorded on March 30, 2000, at reel 010665, frame 0109.

II. RELATED APPEALS AND INTERFERENCES

Appellant's legal representative and the real party in interest are unaware of any appeal or interference that will directly affect, be directly affected by, or have a bearing on the Board's decision in the present appeal.

III. STATUS OF CLAIMS

Claims 1-36, 56, and 57 are pending in the application. Claims 37-55 were canceled or withdrawn during prosecution, and claims 56 and 57 were added during prosecution.

Appellant appeals the rejection of each of claims 1-36, 56, and 57.

IV. STATUS OF AMENDMENTS

Appellant has not filed any amendment subsequent to the final rejection.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Appellant's invention is directed to using descriptive information about an initial purchasing opportunity to identify related purchasing opportunities. (See e.g., Specification at page 2, lines 18-20.) For example, claim 1 is directed to a method in one or more computer systems for identifying auctions offering units of the same item. The method of claim 1 includes displaying information about a first auction, the information including a description of a first item unit offered in the first auction. (See e.g., Specification at Figure 2 (item 210) and associated textual description on page 5, lines 1-5.) The method of claim 1 also includes receiving user input requesting information about other auctions offering item units that are units of the same item as the first item unit. (See e.g., Specification at Figure 2 ("see similar auctions" button 233).)

The method of claim 1 further includes determining, among descriptions of item units offered in a group of auctions including the first auction, the inverse document frequency of terms occurring within the description of the first item unit and selecting a plurality of terms within the description of the first item unit having the largest inverse document frequencies. (See e.g., Specification at Figure 3 (block 301) and associated textual description at page 5.) For each of the selected terms, the method conducts a search for auctions in the group whose item descriptions contain the selected term, and for each auction found in at least one of the conducted searches the method determines which of the selected terms occur in the auction's item description. (See e.g., Specification at Figure 3 (blocks 303-308) and associated textual description on pages 5 and 6.)

The method then identifies an auction among the found auctions where the sum of the inverse document frequencies of the selected terms that occur in the item description for the auction exceeds a threshold as "an auction offering an item unit that is a unit of the same item as the first item unit." (See e.g., Specification at page 7, lines 3-9.) The method then displays this information.

Claim 2 is directed to a method for identifying purchasing opportunities within a set of purchasing opportunities that are similar to a distinguished purchasing opportunity, the distinguished purchasing opportunity having descriptive information associated with it. (See e.g., Specification at page 6, lines 27-30.) The method of claim 2 includes generating a term score reflecting the extent to which the occurrence of terms in the descriptive information associated with the distinguished purchasing opportunity differentiates the distinguished purchasing opportunity from other purchasing opportunities in the set. (See e.g., Specification at page 8, lines 3-12, and Table 2.) The method of claim 2 also includes designating terms having the highest term score as being "key words," and then identifying purchasing opportunities of the set containing one or more key words. (See e.g., Specification at page 7, lines 3-9 and Table 1.)

The method of claim 2 then establishes a purchasing opportunity score for each identified purchasing opportunity by summing the term score of the one or more key words occurring in descriptive information associated with the identified purchasing opportunities. (See e.g., Specification at page 8, lines 3-12, and Table 2.) The method then displays the information about the identified purchasing opportunities.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. The Examiner rejected claim 1 under 35 U.S.C. § 112, first paragraph and objected to this claim on the same basis. The issue to be reviewed on appeal is whether the Specification fails to describe the claimed subject matter of "identifying as an auction an item unit that is a unit of the same item as the first unit" in such a way as to enable one skilled in the art to make or use the invention.

B. The Examiner rejected claim 1 under 35 U.S.C. § 112, second paragraph. The issue to be reviewed on appeal is whether the use of the term "same" when used in the context of "units of the same item" is indefinite.

C. The Examiner rejected claims 1, 56, and 57 under 35 U.S.C. § 103(a) as being unpatentable over the Philips Semiconductor Web page reference ("Philips") in view of U.S. Patent Number 5,848,407 to Ishikawa et al. ("Ishikawa") and U.S. Patent Number 6,212,517 to Sato et al. ("Sato"). The issue to be reviewed on appeal is whether it would have been obvious to modify the product web page of Philips and the inverse document searching techniques disclosed in Ishikawa and Sato to arrive at appellant's method for identifying auctions offering units of the same item using information about select terms occurring within the description of a first auction.

D. The Examiner rejected claims 2-36 under 35 U.S.C. § 103(a) as being unpatentable over Philips in view of Ishikawa and Sato. The issue to be reviewed on appeal is whether it would have been obvious to modify the product web page of Philips and the inverse document searching techniques disclosed in Ishikawa and Sato to arrive at appellant's method for identifying purchasing opportunities within a set of

purchasing opportunities that are similar to a distinguished purchasing opportunity using term scores and purchasing opportunity scores.

VII. ARGUMENT

A. *Rejection under 35 U.S.C. § 112, first paragraph*

1. Legal requirements for enablement

The first paragraph of 35 U.S.C. § 112 provides:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

In other words, the information contained in the disclosure of an application must be sufficient to inform those skilled in the relevant art how to both make and use the claimed invention. However, to comply with 35 U.S.C. 112, first paragraph, it is not necessary to "enable one of ordinary skill in the art to make and use a perfected, commercially viable embodiment absent a claim limitation to that effect." *CFMT, Inc. v. Yieldup Int'l Corp.*, 349 F.3d 1333, 1338 (Fed. Cir. 2003).

The standard for determining whether the specification meets the enablement requirement is whether the claimed invention is enabled so that any person skilled in the art can make and use the invention without undue experimentation. *In re Wands*, 858 F.2d 731, 737 (Fed. Cir. 1988). Moreover, a patent need not teach, and preferably omits, what is well known in the art. *In re Buchner*, 929 F.2d 660, 661 (Fed. Cir. 1991)

2. The Examiner has failed to establish a lack of enablement with respect to the claimed concept of "identifying as an auction an item unit that is a unit of the same item as the first unit."

Throughout prosecution, the Examiner has refused to accept appellant's use of the term "same" in the context of "identifying units of the same item." With respect to enablement, the Examiner asserts that "the claim method cannot identify that the item is the same as the one identified . . . it can only identify an item having a description

where the sum of the inverse document frequencies of the selected terms exceeds a threshold . . . [i]t can only predict similarity based on keywords." (Final Office Action at page 3.)

As stated in the preamble, one of the purposes of appellant's claimed method is to "identify auctions offering units of the same item." For example, if a user is viewing an auction for a Toyco brand "Baby-Blue-Eyes" doll offered by a first seller, the user may want to find out whether other sellers are offering another unit of the same doll item (perhaps at a lower price or in better condition). Provided that multiple units of the same item are actually available on an auction site at any given time, one skilled in the art would understand that appellant's claimed/described technique would allow for such available units (e.g., other units of the "Baby-Blue-Eyes" doll) to be identified in cases "where the sum of the inverse document frequencies of the selected terms that occur in the item description for the auction exceeds a threshold." The Examiner simply does not point to any particular deficiency in the Specification that would allow for a different conclusion. Accordingly, appellant respectfully requests that the Board reverse the rejection of claim 1 under 35 U.S.C. § 112, second paragraph, and the corresponding objection to this claim.¹

B. Rejection under 35 U.S.C. § 112, second paragraph

1. Legal requirements for establishing indefiniteness

The second paragraph of 35 U.S.C. § 112, second paragraph provides:

¹ Appellant recognizes that most claim objections deal with form (as opposed to substance) and are, thus, addressed by means of petition to the Director under 37 C.F.R. § 1.181. Here, however, the Examiner's objection of claim 1 (which essentially parallels the Examiner's rejection under 35 U.S.C. § 112, first paragraph) relates to enablement and, therefore, goes to the merits of the claim (not merely the form). For these reasons, appellant respectfully requests that the Board consider the objection of claim 1 along with the rejection of claim 1 under 35 U.S.C. § 112, first paragraph.

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The purpose of the second paragraph of 35 U.S.C. § 112 is to ensure, with a reasonable degree of particularity, an adequate notification of the metes and bounds of what is being claimed. *In re Hammack*, 427 F.2d 1378, 1382 (C.C.P.A. 1970). The Examiner has the initial burden of demonstrating indefiniteness of the claims. *In re Oetiker*, 977 F.2d 1443, 1445, (Fed. Cir. 1992). It is well established that "definiteness of the language employed must be analyzed -- not in a vacuum, but always in light of the teachings of the prior art and of the particular application disclosure as it would be interpreted by one possessing the ordinary level of skill in the pertinent art." *In re Moore*, 439 F.2d 1232, 1235, (C.C.P.A. 1971). Moreover, applicants may be their own lexicographers as long as the meaning assigned to the terms is not repugnant to the term's well known usage. *In re Hill*, 161 F.2d 367, 369 (C.C.P.A. 1947).

2. The Examiner has failed to establish indefiniteness with respect to the claimed concept of identifying "units of the same item."

Throughout prosecution, the Examiner has asserted that "the term 'same' in claim 1 is used by [sic] the claim to mean 'similar or the same,' while the accepted meaning is 'resembling in every relevant respect; conforming in every respect; being one without addition, change, or discontinuance; identical,'" and that claim 1 is therefore indefinite. (Final Office Action at Page 3.) Appellant respectfully disagrees that claim 1 is indefinite.

Appellant's use of the term "same" in the context of "units of the same item" is consistent with its ordinary and customary meaning. Claim 1 recites a method for "identifying auctions offering units of the same item." Taking an item example used in Figure 4 of the Specification, if a user wants to purchase a "Black and Decker 10 inch circular saw," the user might, at any given time, find multiple sellers that want to auction off saws of the exact same model, with each saw representing a distinct purchasing opportunity. In this example, one skilled in the art would have no problem understanding that each available purchasing opportunity offers a unit of the same saw

item. This understanding of the term "units of the same item" is consistent both with the ordinary meaning of the term "same" and with the use of the term in the Specification itself (see e.g., the Specification at pages 1 and 3). Accordingly, the term "same" as used in claim 1 and more specifically, the phrase "units of the same item" is neither inconsistent with the commonly accepted meaning of this term nor the definition provided by the Examiner (see e.g., pages 3 and 4 of the Final Office Action). Thus, appellant respectfully requests that the Board reverse the rejection of claim 1 under 35 U.S.C. § 112, second paragraph.

C. ***Rejections under 35 U.S.C. § 103(a)***

1. **Legal requirements for obviousness**

35 U.S.C. 103(a) provides:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

To reject claims as being obvious, "the examiner bears the initial burden of presenting a *prima facie* case of obviousness." *In re Rijckaert*, 9 F.3d 1531, 1532 (Fed. Cir. 1993). A *prima facie* case of obviousness is established "when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art." *In re Bell*, 991 F.2d 781, 782 (Fed. Cir. 1993). The Examiner is not allowed to use hindsight gleaned from the invention itself to modify references. *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 1050-51 (Fed. Cir. 1988). Furthermore, "[t]he mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." *In re Fritch*, 972 F.2d 1260, 1266 (Fed. Cir. 1992). The Federal Circuit emphasized this point by stating that:

Although a prior art device could have been turned upside down, that did not make the modification obvious unless the prior art fairly suggested the desirability of turning the device upside down.

In re Chu, 66 F.3d 262, 298 (Fed. Cir. 1994). Appellant's respectfully request that the Examiner's rejection under 35 U.S.C. § 103 be reversed based on failure to establish a case of obviousness based on the above standards.

2. The Applied References

a. *The Philips Reference*

The Philips reference is an archived web page document (Copyright 1998) that shows a sample of "product catalog" page from a Philips Semiconductors web site. The page is divided into various sections, which are outlined in the table below:

SECTION OF PAGE	DESCRIPTION
Title/Intro	Provides the title (and possibly a photograph) of a specific product that is the subject of the catalog page (e.g., an SA571 Compondor circuit). The title section also appears to list and possibly provide hyperlinks to each of the other sections displayed on the web page (e.g., Description, Applications, Features, etc.).
Description	Provides a general description of the product that is the subject of the catalog page.
Applications	Lists applications of the product that is the subject of the catalog page (e.g., high level limiter, CD player, etc.).
Features	Lists features of the product that is the subject of the catalog page (e.g., operates down to 6VDC).
Datasheet	Provides links to downloadable datasheets about the product that is the subject of the catalog page.
Products & Packages	Provides ordering and part number information for the product that is the subject of the catalog page.
Find similar products	Provides two product category hierarchies related to the product that is the subject of the catalog page (the SA571 Compondor circuit). The archived web page does not illustrate any links to individual products other than the SA 571 Compondor.

Because it is the focus of many of the Examiner's rejections, a replication of the "Find similar products" section of the archived Philips web page is provided below:

Find similar products by:

- Product Catalog
 - ▼ IC's
 - ▼ Audio/Video/PC
 - ▼ IC01 Semiconductors for Radio, Audio and CD/DVD Systems
 - ▼ Audio Circuits (114)
 - ▼ Compandors (2)
 - SA571: Compandor
 - ▼ IC's
 - ▼ Communications
 - ▼ IC17a Semiconductors for Wireless Communications
 - ▼ Compandors (4)
 - SA571: Compandor

As shown, the archived Philips web page appears to display two product category hierarchies using interactive drill-down-style lists. A broad parent category labeled "IC's" tops both of the hierarchies. In the first hierarchy, the IC's category is followed by a subcategory labeled "Audio/Video/PC." In the second hierarchy, the IC's category is followed by a subcategory labeled "Communications." Each of the hierarchies continues to drill-down to the level of the selected product (SA571 Compandor), displaying additional subcategories along the way, including a more general "Compandors" subcategory. At the bottom of each hierarchy is a reference to the SA 571 Compandor item, which is the subject of the archived web page.

The archived Philips web page cited by the Examiner provides little insight as to how the displayed hierarchies allow a user to "find similar products." For example, the only product shown in either of the displayed hierarchies is the product that is the subject of the catalog page itself (i.e., the SA571 Compandor). Because only

categories and not products (other than the SA571 Compandor) are shown in the example, the only method for "finding similar products" that Philips could possibly suggest is category-based product browsing. For example, while not specifically shown, each displayed category may be a hyperlink to another web page showing products under that category.

b. The Ishikawa Reference

Ishikawa discloses key word searching techniques (including inverse document frequency) for searching related hypertext documents, such as documents written in HTML. However, Ishikawa does not describe an application of inverse document frequency searching that is similar to appellant's technique. For example, while the Examiner asserts (without pointing to specific sections of the reference) that Ishikawa shows the steps of "determining which of the terms is in the found item's description and identifying a similar auction where the sum of the IDFs determine the similarity," appellant respectfully disagrees and notes that Ishikawa does not disclose auctions. In fact, Ishikawa does not provide any reference to the sale of items or products. Instead, Ishikawa generally describes techniques for selecting hypertext documents written in HTML.

c. The Sato Reference

Like Ishikawa, Sato discloses key word searching techniques using inverse document frequency. However, like Ishikawa, Sato does not describe auctions or the sale of products or items. Accordingly, Sato does not describe an application of inverse document frequency searching that is similar to appellant's technique.

3. *Claim 1 and dependent claims 56 and 57 are not obvious when viewed in light of Philips in combination with Ishikawa and Sato.*

In the Final Office Action mailed June 14, 2004, the Examiner asserted that "it would have been obvious to one of ordinary skill in the art to modify the method of Philips by performing the steps of Sato et al in order provide a search tool which provides a measure of item similarity without requiring additional customer input or

manual searching through documents." (Final Office Action at page 4.) The Examiner further asserted that "[i]t would have been obvious to one of ordinary skill in the art to further modify the method of Philips by determining similar documents by adding the IDFs for the terms in order to provide a simple and efficient means of determining similarity." (Final Office Action at page 5.) For the reasons explained below, these assertions, which fail to point to any particular sections or page numbers of the applied references, are insufficient to form the basis of a proper § 103 rejection of claims 1, 56, and 57.

Appellant's techniques as recited in claim 1 are directed to identifying auctions "offering units of the same item." Appellant's techniques include "displaying information about a first auction, the information including a description of a first item unit offered in the first auction" and "receiving user input requesting information about other auctions offering item units that are units of the same item as the first item unit." The applied references, either alone or in combination, do not disclose these elements. For example, none of the applied references discloses auctions, and although selling items via auction may be well-known, there is no suggestion in any of the references to apply the described techniques in the context of auctions.

Appellant's techniques as recited in claim 1 further include "determining, for the description of the first item unit among descriptions of item units offered in a group of auctions including the first auction, the inverse document frequency of terms occurring within the description of the first item unit" and "selecting a plurality of terms within the description of the first item unit having the largest inverse document frequencies." The applied references, either alone or in combination, do not disclose these elements. For example, none of the applied references discloses determining the inverse document frequency of terms occurring within item descriptions.

Appellant's techniques as recited in claim 1 further include "for each of the selected terms, conducting a search for auctions in the group whose item descriptions contain the selected term." The Examiner admits that Philips does not disclose this element; but asserts (without specific support) that Philips in combination with Sato

does. Similarly, the Examiner admits that Philips does not disclose the element "for each auction found in at least one of the conducted searches, determining which of the selected terms occur in the auction's item description;" but asserts, without specific support, that Ishikawa does. However, the applied references, either alone or in combination, do not disclose these elements. For example, neither Sato nor Ishikawa disclose searching for auctions based on terms identified in an item description. Philips does not disclose this either. The fact that Philips does disclose "finding similar products" is not enough to teach or suggest conducting a "search for auctions" or related activities, especially since Philips' technique for finding similar products is based on displaying related product categories that the user may manually select from (e.g., via hyperlink) to look for other products that may (or may not) be similar to the original product (e.g., the SA 571 Compondor). Thus, the product category approach employed by the Philips web page is very different from searching for items having particular terms in their descriptions. According to appellant's Specification, Philips' product category approach has some disadvantages when viewed in light of appellant's technique:

Unfortunately, purchasing opportunities are generally not well-organized with respect to these objectives. Indeed, it is common for purchasing opportunities to be organized into general item categories, such as "office supplies" vs. "kitchen implements." In some cases, purchasing opportunities are not organized at all.

Accordingly, a technique for automatically identifying opportunities to purchase similar items on the World Wide Web would have significant utility.

(Specification at 1:22-2:2.)

Appellant's techniques as recited in claim 1 further include "identifying as an auction offering an item unit that is a unit of the same item as the first item unit an auction among the found auctions where the sum of the inverse document frequencies of the selected terms that occur in the item description for the auction exceeds a threshold" and "displaying information about the identified auction." Assuming that the

Philips web page is, indeed, capable of "finding similar products,"² it is clear that Philips' method for finding similar products is very different than appellant's technique for identifying auctions "offering units of the same item." Unlike appellant's technique of claim 1, which is directed to auctions (for which it is often possible to find multiple distinct purchasing opportunities, each corresponding to a different unit of the same item), Philips deals only with sales of items manufactured or distributed by Philips, where there is typically only one available purchasing opportunity for each type of item. For example, if a Philips web page user wants to buy a SA 571 Compandor, Philips provides only one purchasing opportunity for that item—the same purchasing opportunity that Philips will offer to any other user that wishes to purchase a SA 571 Compandor. In other words, because the Philips web page is not an auction site, a store front type web site, or any other site that offers multiple purchasing opportunities for different units of the same item, it is not possible, in the context of the Philips web page, to identify different purchasing opportunities that each offer a "unit of the same item."

As discussed above, several elements of the claimed technique are missing from the applied references, whether viewed alone or in combination. In addition, unless hindsight reconstruction is used, there is nothing in the teachings from the applied references that would have suggested the claimed subject matter to a person of ordinary skill in the art. The Examiner has also failed to identify any of the motivation to combine the applied references. Accordingly, appellant respectfully request that the Board reverse the rejection of claims 1, 56, and 57, noting that claims 56 and 57 depend from claim 1 and stand or fall with claim 1 for the purpose of this appeal.

² Appellant notes that the example of the Philips web page that the Examiner provides does not actually show "finding a similar product." Rather it merely shows the display of a product category hierarchy that shows the categories under which the SA 571 Compandor can be found.

4. Claims 2-36 are not obvious when viewed in light of Philips in combination with Ishikawa and Sato.

In the Final Office Action mailed June 14, 2004, the Examiner asserted that "[i]t would have been obvious to one of ordinary skill in the art to modify the method of Philips by performing the steps of Sato et al in order provide a search tool which provides a measure of item similarity without requiring additional customer input or manual searching through documents." (Final Office Action at page 6.) The Examiner further asserted that "[i]t would have been obvious to one of ordinary skill in the art to further modify the method of Philips by finding and scoring similar documents by adding the IDFs for the terms in order to provide a simple and efficient means of determining similarity." (Final Office Action at page 5.) For the reasons explained below, these assertions, which fail to point to any particular sections or page numbers of the applied references, are insufficient to form the basis of a proper § 103 rejection of claims 2-36.

Claim 2 is directed to "identifying purchasing opportunities within a set of purchasing opportunities that are similar to a distinguished purchasing opportunity, the distinguished purchasing opportunity having descriptive information associated with it." Appellant's techniques as recited in claim 2 include "identifying purchasing opportunities of a set containing one or more key words." As described above with respect to claims 1, 56, and 57, Philips relies exclusively on product categories (and not product descriptions) to "find similar products" and therefore does not teach or suggest appellant's technique of claim 2, whether viewed alone or in combination with the other applied reference. Likewise, Sato does not disclose identifying purchasing opportunities from a set, and there is no motivation in either Philips or Sato to combine these two references, especially since Philips' product category technique is so different from identifying purchasing opportunities based on key words in descriptive information associated with an item.

Appellant's techniques as recited in claim 2 further include "establishing a purchasing opportunity score for each identified purchasing opportunity" and "displaying information about the identified purchasing opportunities." The Examiner admits that Philips "does not show the specific search method." In addition, neither

Philips nor the other applied references depict or suggest identifying purchasing opportunities of a set containing one or more key words or establishing purchasing opportunity scores. For example, contrary to the Examiner's assertions, Ishikawa does not mention "scoring" and certainly does not describe any sort of "purchasing opportunity score." Moreover, there is no motivation to combine the techniques disclosed in Ishikawa and/or Sato with those disclosed in Philips because Philips' category-based approach for "finding similar items" is so different from techniques involving identifying purchasing opportunities based on terms in there item descriptions and purchasing opportunity scores.

As discussed above, several elements of the claimed technique are missing from the combined applied references. In addition, unless hindsight reconstruction is used, there is nothing in the teachings from the applied references that would have suggested the claimed subject matter to a person of ordinary skill in the art. The Examiner has also failed to identify any of the sources of motivation to combine the applied references. Accordingly, appellant respectfully request that the Board reverse the rejection of claims 2-36 under 35 U.S.C. § 103, noting that claims 3-36 depend from claim 2 (or its dependents) and stand or fall with claim 2 for the purpose of this appeal.

VIII. Claims Appendix

A copy of the claims involved in the present appeal is attached hereto as Appendix A.

IX. Evidence Appendix

None

X. Related Proceedings

None.

Date: 1/7/05

Respectfully submitted,
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APPENDIX A

Pending Claims

1. (Previously Presented) A method in one or more computer systems for identifying auctions offering units of the same item, comprising:

displaying information about a first auction, the information including a description of a first item unit offered in the first auction;

receiving user input requesting information about other auctions offering item units that are units of the same item as the first item unit;

determining, for the description of the first item unit among descriptions of item units offered in a group of auctions including the first auction, the inverse document frequency of terms occurring within the description of the first item unit;

selecting a plurality of terms within the description of the first item unit having the largest inverse document frequencies;

for each of the selected terms, conducting a search for auctions in the group whose item descriptions contain the selected term;

for each auction found in at least one of the conducted searches, determining which of the selected terms occur in the auction's item description;

identifying as an auction offering an item unit that is a unit of the same item as the first item unit an auction among the found auctions where the sum of the inverse document frequencies of the selected terms that occur in the item description for the auction exceeds a threshold; and

displaying information about the identified auction.

2. (Previously Presented) A method in a computer system for identifying purchasing opportunities within a set of purchasing opportunities that are similar to a distinguished purchasing opportunity, the distinguished purchasing opportunity having descriptive information associated with it, comprising:

for each of a plurality of terms occurring in the descriptive information associated with the distinguished purchasing opportunity, generating a term score

reflecting the extent to which the occurrence of the term in the descriptive information associated with the distinguished purchasing opportunity differentiates the distinguished purchasing opportunity from other purchasing opportunities in the set;

selecting as key words a plurality of terms having the highest term scores; identifying purchasing opportunities of the set containing one or more key words;

establishing a purchasing opportunity score for each identified purchasing opportunity by summing the term score of the one or more key words occurring in descriptive information associated with the identified purchasing opportunities; and

displaying information about one or more of the identified purchasing opportunities.

3. (Original) The method of claim 2 wherein generating a term score for each term includes determining the fraction of occurrences of the term in descriptive information associated with the purchasing opportunities of the set that occur in the descriptive information associated with the distinguished purchasing opportunity.

4. (Original) The method of claim 2 wherein identifying purchasing opportunities of the set containing key words includes performing a separate search for purchasing opportunities whose descriptive information includes each key word to produce a search result.

5. (Original) The method of claim 4, further comprising determining which key words occur in the descriptive information associated with each purchasing opportunities based upon which of the produced search results contain the purchasing opportunity.

6. (Original) The method of claim 2 wherein the distinguished purchasing opportunity and at least a subset of the purchasing opportunities of the set are of one or more purchasing opportunity types selected from the group consisting of:

store;

classified sale;
auction;
reverse auction; and
purchase aggregation.

7. (Original) The method of claim 2, further comprising selecting the distinguished purchasing opportunity in response to a user request to display information about the distinguished purchasing opportunity.

8. (Original) The method of claim 2, further comprising selecting the distinguished purchasing opportunity in response to the exercise of the distinguished purchasing opportunity by a selected user.

9. (Original) The method of claim 8, further comprising selecting the distinguished purchasing opportunity in response to the purchase by the selected user of an item offered in the distinguished purchasing opportunity.

10. (Original) The method of claim 8, further comprising selecting the distinguished purchasing opportunity in response to a bid by the selected user on an item offered in the distinguished purchasing opportunity.

11. (Original) The method of claim 2, further comprising, in response to a user request for information about a purchasing opportunity similar to the distinguished purchasing opportunity, displaying information about the identified purchasing opportunity having the largest purchasing opportunity score.

12. (Original) The method of claim 2, further comprising, in response to a user request for information about the distinguished purchasing opportunity, displaying information about the identified purchasing opportunity having the largest purchasing opportunity score in conjunction with displaying information about the distinguished purchasing opportunity.

13. (Original) The method of claim 2, further comprising displaying at least a portion of the identified purchasing opportunities in the order of their purchasing opportunity scores.

14. (Previously Presented) The method of claim 2, further comprising displaying a proper subset of the identified purchasing opportunities, wherein each of the identified purchasing opportunities in the proper subset has a purchasing opportunity score that exceeds a minimum threshold.

15. (Original) The method of claim 14 wherein the displaying displays a predetermined fixed number of the identified purchasing opportunities.

16. (Original) The method of claim 14 wherein the displaying displays all of the identified purchasing opportunities whose purchasing opportunity scores each exceed the minimum threshold.

17. (Original) The method of claim 2 wherein a predetermined fixed number of key words are selected.

18. (Original) The method of claim 2 wherein a number of terms that is a predetermined fraction of the number of terms occurring in the descriptive information associated with the distinguished purchasing opportunity are selected as key words.

19. (Original) The method of claim 2 wherein all of the terms whose term scores exceed a minimum threshold are selected as key words.

20. (Original) The method of claim 2 wherein the descriptive information associated with the distinguished purchasing opportunity includes the purchasing opportunity type of the distinguished purchasing opportunity.

21. (Original) The method of claim 2 wherein the descriptive information associated with the distinguished purchasing opportunity includes an item name of an item offered in the distinguished purchasing opportunity.

22. (Original) The method of claim 2 wherein the descriptive information associated with the distinguished purchasing opportunity includes an item description of an item offered in the distinguished purchasing opportunity.

23. (Original) The method of claim 2 wherein the descriptive information associated with the distinguished purchasing opportunity includes a price at which an item is offered in the distinguished purchasing opportunity.

24. (Original) The method of claim 2 wherein the descriptive information associated with the distinguished purchasing opportunity includes a seller identity of the distinguished purchasing opportunity.

25. (Original) The method of claim 2 wherein the descriptive information associated with the distinguished purchasing opportunity includes a seller location of the distinguished purchasing opportunity.

26. (Original) The method of claim 2 wherein the descriptive information associated with the distinguished purchasing opportunity includes availability of an item offered in the distinguished purchasing opportunity.

27. (Original) The method of claim 2 wherein the descriptive information associated with the distinguished purchasing opportunity includes shipping terms for an item offered in the distinguished purchasing opportunity.

28. (Original) The method of claim 2 wherein the descriptive information associated with the distinguished purchasing opportunity includes forms of payment accepted for the distinguished purchasing opportunity.

29. (Original) The method of claim 2 wherein distinguished purchasing opportunity is an auction, and wherein the descriptive information associated with the distinguished purchasing opportunity includes the closing date of the auction.

30. (Original) The method of claim 2 wherein a distinguished item is offered for purchase in the distinguished purchasing opportunity, and wherein the descriptive information associated with the distinguished purchasing opportunity includes a publisher of the distinguished item.

31. (Original) The method of claim 2 wherein a distinguished item is offered for purchase in the distinguished purchasing opportunity, and wherein the descriptive information associated with the distinguished purchasing opportunity includes an author of the distinguished item.

32. (Original) The method of claim 2 wherein a distinguished item is offered for purchase in the distinguished purchasing opportunity, and wherein the descriptive information associated with the distinguished purchasing opportunity includes an artist of the distinguished item.

33. (Original) The method of claim 2 wherein a distinguished item is offered for purchase in the distinguished purchasing opportunity, and wherein the descriptive information associated with the distinguished purchasing opportunity includes a performer of the distinguished item.

34. (Original) The method of claim 2 wherein a distinguished item is offered for purchase in the distinguished purchasing opportunity, and wherein the descriptive information associated with the distinguished purchasing opportunity includes a size of the distinguished item.

35. (Original) The method of claim 2 wherein a distinguished item is offered for purchase in the distinguished purchasing opportunity, and wherein the descriptive

information associated with the distinguished purchasing opportunity includes a color of the distinguished item.

36. (Original) The method of claim 2 wherein a distinguished item is offered for purchase in the distinguished purchasing opportunity, and wherein the descriptive information associated with the distinguished purchasing opportunity includes a style of the distinguished item.

37-41. (Withdrawn)

42-53. (Cancelled)

54-55. (Withdrawn)

56. (Previously Presented) The method of claim 1, further comprising displaying information about at least a portion of the found auctions.

57. (Previously Presented) The method of claim 1 wherein selecting the plurality of terms includes comparing the inverse document frequency of each of the terms occurring within the description of the first item with a minimum threshold.